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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/216,519 | 12/18/1998 | DARREN KERR | 112025-0112 | 9572 |

7590 06/16/2004

CESARI AND MCKENNA, LLP
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BOSTON, MA 02210

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| EXAMINER |
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MEISLAHN, DOUGLAS J

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| ART UNIT | PAPER NUMBER |
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2137

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DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/216,519

Applicant(s)

KERR ET AL.

Examiner

Douglas J. Meislahn

Art Unit

2137

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1-19, 21-33, 35-50 and 52 is/are allowed.
- 6) ☒ Claim(s) 20, 34, 51 and 53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This action is in response to the amendment filed 31 March 2004 that caused entry of the after-final amendment filed 06 February 2004. The after-final amended claims 1, 3-14, 20-23, 27, 32-35, 40, 42, 44, 45, and 49-53.

Response to Arguments

2. Applicant's arguments filed 31 March 2004 have been fully considered but they are not persuasive. With respect to the 101 rejection, the subject material of the claims is not tangibly embodied. While applicant is correct that uses of electromagnetic energy can be patented, the current claims are not directed to a use of electromagnetic energy but rather to computer code that is not tangibly embodied. By way of example, discovering that data can be conveyed via electromagnetic signals is statutory. But, assigning certain signals to the electromagnetic signal is not statutory.

3. With respect to claim 20, a multiplexer is a selector.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 34, 51, and 53 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Data structures must be tangibly embodied to be statutory.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Farrell et al. in view of Chi et al., and Narad et al.

Farrell et al. show a TCSM at 103 in figure 10. Element 102 in the same figure is a multiplexer that selects either an (indirect) output of the TCSM or inputs from an outside source, which are sent from microcontroller. Farrell et al. do not say that the TCSM is for encryption, that a plurality of them are arranged in rows and columns between an input header buffer and an output header buffer, or that they are responsive to the microcontroller reading an opcode. Narad et al. teach TCSMs as encryptors in figures 1-3 as well as other sections already cited. Chi et al. teach controlling cryptographic processes with opcodes at lines 56-63 of column 4. Chi et al. also teach using arrays in lines 34-56 of column 11. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to place the pipelined TCSM of Farrell et al. into an array to multiply its power as shown by Chi et al. and to use opcodes (also taught by Chi et al.) to direct it to perform encryption, a computationally-intensive procedure, as taught by Narad et al.

Allowable Subject Matter

7. Claims 1-19, 21-33, 35-50, and 52 are allowed.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas J. Meislahn whose telephone number is (703) 305-1338. The examiner can normally be reached on between 9 AM and 6 PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory A. Morse can be reached on (703) 308-4789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


DJM


Douglas J. Meislahn
Examiner
Art Unit 2137